

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/516,505
Source: PCT/10
Date Processed by STIC: 12/14/04

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/516,505

CRF Edit Date: 12/14/04
Edited by: *sm*

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

 / Deleted: */* invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

___ Other:



PCT

RAW SEQUENCE LISTING

DATE: 12/14/2004

PATENT APPLICATION: US/10/516,505

TIME: 18:17:40

Input Set : N:\Cr4\12102004\J516505.raw

Output Set: N:\CRF4\12142004\J516505.raw

1 <110> APPLICANT: ISIS Pharmaceuticals Inc.
 2 Eric G. Marcusson
 3 C. Frank Bennett
 4 Kenneth W. Dobie
 5 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF EXTRACELLULAR-SIGNAL-REGULATED
 KINASE-6 EXPRESSION
 6 <130> FILE REFERENCE: PTS-0055WO
 7 <140> CURRENT APPLICATION NUMBER: US/10/516,505
 8 <141> CURRENT FILING DATE: 2004-12-01
 9 <150> PRIOR APPLICATION NUMBER: 10/348,431
 10 <151> PRIOR FILING DATE: 2003-01-17
 11 <150> PRIOR APPLICATION NUMBER: 10/174,465
 12 <151> PRIOR FILING DATE: 2002-06-17
 13 <160> NUMBER OF SEQ ID NOS: 233
 15 <210> SEQ ID NO: 1
 16 <211> LENGTH: 20
 17 <212> TYPE: DNA
 18 <213> ORGANISM: Artificial Sequence
 19 <220> FEATURE:
 20 <223> OTHER INFORMATION: Antisense Oligonucleotide
 21 <400> SEQUENCE: 1
 22 tccgtcatcg ctccctcaggg 20
 24 <210> SEQ ID NO: 2
 25 <211> LENGTH: 20
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Artificial Sequence
 28 <220> FEATURE:
 29 <223> OTHER INFORMATION: Antisense Oligonucleotide
 30 <400> SEQUENCE: 2
 31 gtgcgcgcga gcccgaaatc 20
 33 <210> SEQ ID NO: 3
 34 <211> LENGTH: 20
 35 <212> TYPE: DNA
 36 <213> ORGANISM: Artificial Sequence
 37 <220> FEATURE:
 38 <223> OTHER INFORMATION: Antisense Oligonucleotide
 39 <400> SEQUENCE: 3
 40 atgcattctg cccccaagga 20
 42 <210> SEQ ID NO: 4
 43 <211> LENGTH: 1670
 44 <212> TYPE: DNA
 45 <213> ORGANISM: H. sapiens
 46 <220> FEATURE:
 47 <220> FEATURE:

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Input Set : N:\Crf4\12102004\J516505.raw

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48 <221> NAME/KEY: CDS
49 <222> LOCATION: (34)...(1137)
50 <400> SEQUENCE: 4
51      ggctctgcgg ggtgggcagc tcccgggcct gcc atg agc tct ccg ccg ccc acc      54
52                                     Met Ser Ser Pro Pro Pro Thr
53                                     1           5
54      cgc agt ggc ttt tac cgc cag gag gtg acc aag acg gcc tgg gag gtg      102
55      Arg Ser Gly Phe Tyr Arg Gln Glu Val Thr Lys Thr Ala Trp Glu Val
56          10           15           20
57      cgc gcc gtg tac cgg gac ctg cag ccc gtg ggc tcg ggc gcc tac ggc      150
58      Arg Ala Val Tyr Arg Asp Leu Gln Pro Val Gly Ser Gly Ala Tyr Gly
59          25           30           35
60      gcg gtg tgc tcg gcc gtg gac ggc cgc acc ggc gct aag gtt gcc atc      198
61      Ala Val Cys Ser Ala Val Asp Gly Arg Thr Gly Ala Lys Val Ala Ile
62          40           45           50           55
63      aag aag ctg tat cgg ccc ttc cag tcc gag ctg ttc gcc aag ctc gcc      246
64      Lys Lys Leu Tyr Arg Pro Phe Gln Ser Glu Leu Phe Ala Lys Leu Ala
65          60           65           70
66      tac cgc gag ctg cgc ctg ctc aag cac atg cgc cac gag aac gtg atc      294
67      Tyr Arg Glu Leu Arg Leu Leu Lys His Met Arg His Glu Asn Val Ile
68          75           80           85
69      ggg ctg ctg gac gta ttc act cct gat gag acc ctg gat gac ttc acg      342
70      Gly Leu Leu Asp Val Phe Thr Pro Asp Glu Thr Leu Asp Asp Phe Thr
71          90           95           100
72      gac ttt tac ctg gtg atg ccg ttc atg ggc acc gac ctg ggc aag ctc      390
73      Asp Phe Tyr Leu Val Met Pro Phe Met Gly Thr Asp Leu Gly Lys Leu
74          105           110           115
75      atg aaa cat gag aag cta ggc gag gac cgg atc cag ttc ctc gtg tac      438
76      Met Lys His Glu Lys Leu Gly Glu Asp Arg Ile Gln Phe Leu Val Tyr
77      120           125           130           135
78      cag atg atg aag ggg ctg agg tat atc cac gct gcc ggc atc atc cac      486
79      Gln Met Met Lys Gly Leu Arg Tyr Ile His Ala Ala Gly Ile Ile His
80          140           145           150
81      aga gac ctg aag ccc ggc aac ctg gct gtg aac gaa gac tgt gag ctg      534
82      Arg Asp Leu Lys Pro Gly Asn Leu Ala Val Asn Glu Asp Cys Glu Leu
83          155           160           165
84      aag atc ctg gac ttc ggc ctg gcc agg cag gca gac agt gag atg act      582
85      Lys Ile Leu Asp Phe Gly Leu Ala Arg Gln Ala Asp Ser Glu Met Thr
86          170           175           180
87      ggg tac gtg gtg acc cgg tgg tac cgg gct ccc gag gtc atc ttg aat      630
88      Gly Tyr Val Val Thr Arg Trp Tyr Arg Ala Pro Glu Val Ile Leu Asn
89          185           190           195
90      tgg atc gcg tac acg cag acg gtg gac atc tgg tct gtg ggc tgc atc      678
91      Trp Ile Ala Tyr Thr Gln Thr Val Asp Ile Trp Ser Val Gly Cys Ile
92      200           205           210           215
93      atg gcg gag atg atc aca ggc aag acg ctg ttc aag ggc agc gac cac      726
94      Met Ala Glu Met Ile Thr Gly Lys Thr Leu Phe Lys Gly Ser Asp His
95          220           225           230
96      ctg gac cag ctg aag gag atc atg aag gtg acg ggg acg cct ccg gct      774

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97      Leu Asp Gln Leu Lys Glu Ile Met Lys Val Thr Gly Thr Pro Pro Ala
98              235                      240                      245
99      gag ttt gtg cag cgg ctg cag agc gat gag gcc aag aac tac atg aag      822
100      Glu Phe Val Gln Arg Leu Gln Ser Asp Glu Ala Lys Asn Tyr Met Lys
101              250                      255                      260
102      ggc ctc ccc gaa ttg gag aag aag gat ttt gcc tct atc ctg acc aat      870
103      Gly Leu Pro Glu Leu Glu Lys Lys Asp Phe Ala Ser Ile Leu Thr Asn
104              265                      270                      275
105      gca agc cct ctg gct gtg aac ctc ctg gag aag atg ctg gtg ctg gac      918
106      Ala Ser Pro Leu Ala Val Asn Leu Leu Glu Lys Met Leu Val Leu Asp
107      280                      285                      290                      295
108      gcg gac atc agg ttg act gca ggc gag ttt ctt tcc cat ccc tac ttc      966
109      Ala Asp Ile Arg Leu Thr Ala Gly Glu Phe Leu Ser His Pro Tyr Phe
110              300                      305                      310
111      gag tcc ctg cac gac acg gaa gat gag ccc cag gtc cag aag tat gat      1014
112      Glu Ser Leu His Asp Thr Glu Asp Glu Pro Gln Val Gln Lys Tyr Asp
113              315                      320                      325
114      gac tcc ttt gac tac ttt gac cgc aca ctg gat gaa tgg aag cgt gtt      1062
115      Asp Ser Phe Asp Tyr Phe Asp Arg Thr Leu Asp Glu Trp Lys Arg Val
116              330                      335                      340
117      act tac aaa gag gtg ctc agc ttc aag cct ccc cgg cag ctg ggg gcc      1110
118      Thr Tyr Lys Glu Val Leu Ser Phe Lys Pro Pro Arg Gln Leu Gly Ala
119              345                      350                      355
120      agg gtc tcc aag gag acg cct ctg tga agatctctgg gctccggggt      1157
121      Arg Val Ser Lys Glu Thr Pro Leu
122      360                      365
123      ggcagtgagg accaccttca ccttccacct gagaggggac tctcgttgcc accttgacct      1217
124      tggctggggc ttgcatccca aggcattccat cagagcagac gcccgggttc catggaccct      1277
125      cctccccact gccatgcctc tgctcttttg cgcccatcat ggaggagcac ctgaactttc      1337
126      tggacaagac ctctggccga cctgggggatg gcctctgatc cctggagcag tggaaacacaa      1397
127      aaaacaatac tctcagaaac ctcagagctg gtggggctcc agatcagcct tggcctctga      1457
128      gccctgcttg ctctggggcca tgcagaggaa ggacagaggg tgggagcagg gcaccaactc      1517
129      agggacatcc cctctccttg gcgacgtcag tggaccttcc tgcaccccca gcctggaatg      1577
130      taaatcagct gtgtggtgcc cgcgtggctg gaaggaaata gaccttttg tagctccaaa      1637
131      aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa      1670
133 <210> SEQ ID NO: 5
134 <211> LENGTH: 20
135 <212> TYPE: DNA
136 <213> ORGANISM: Artificial Sequence
137 <220> FEATURE:
138 <223> OTHER INFORMATION: PCR Primer
139 <400> SEQUENCE: 5
140      ctcgttgcca ccttgacctt      20
142 <210> SEQ ID NO: 6
143 <211> LENGTH: 16
144 <212> TYPE: DNA
145 <213> ORGANISM: Artificial Sequence
146 <220> FEATURE:
147 <223> OTHER INFORMATION: PCR Primer

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Input Set : N:\Cr4\12102004\J516505.raw

Output Set: N:\CRF4\12142004\J516505.raw

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148 <400> SEQUENCE: 6
149      tggaaccg gcgtct                                     16
151 <210> SEQ ID NO: 7
152 <211> LENGTH: 24
153 <212> TYPE: DNA
154 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: PCR Probe
157 <400> SEQUENCE: 7
158      ttgcatcca agcatccat caga                             24
160 <210> SEQ ID NO: 8
161 <211> LENGTH: 19
162 <212> TYPE: DNA
163 <213> ORGANISM: Artificial Sequence
164 <220> FEATURE:
165 <223> OTHER INFORMATION: PCR Primer
166 <400> SEQUENCE: 8
167      gaaggtgaag gtcggagtc                                 19
169 <210> SEQ ID NO: 9
170 <211> LENGTH: 20
171 <212> TYPE: DNA
172 <213> ORGANISM: Artificial Sequence
173 <220> FEATURE:
174 <223> OTHER INFORMATION: PCR Primer
175 <400> SEQUENCE: 9
176      gaagatggtg atgggatttc                                20
178 <210> SEQ ID NO: 10
179 <211> LENGTH: 20
180 <212> TYPE: DNA
181 <213> ORGANISM: Artificial Sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: PCR Probe
184 <400> SEQUENCE: 10
185      caagcttccc gttctcagcc                                 20
187 <210> SEQ ID NO: 11
188 <211> LENGTH: 20
189 <212> TYPE: DNA
190 <213> ORGANISM: Artificial Sequence
191 <220> FEATURE:
192 <223> OTHER INFORMATION: Antisense Oligonucleotide
193 <400> SEQUENCE: 11
194      ccttcatcat ctggtacacg                                 20
196 <210> SEQ ID NO: 12
197 <211> LENGTH: 20
198 <212> TYPE: DNA
199 <213> ORGANISM: Artificial Sequence
200 <220> FEATURE:
201 <223> OTHER INFORMATION: Antisense Oligonucleotide
202 <400> SEQUENCE: 12

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RAW SEQUENCE LISTING

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Input Set : N:\Cr4\12102004\J516505.raw

Output Set: N:\CRF4\12142004\J516505.raw

203	tccttcagct ggtccaggtg	20
205	<210> SEQ ID NO: 13	
206	<211> LENGTH: 20	
207	<212> TYPE: DNA	
208	<213> ORGANISM: Artificial Sequence	
209	<220> FEATURE:	
210	<223> OTHER INFORMATION: Antisense Oligonucleotide	
211	<400> SEQUENCE: 13	
212	ccaccagctc tgaggtttct	20
214	<210> SEQ ID NO: 14	
215	<211> LENGTH: 20	
216	<212> TYPE: DNA	
217	<213> ORGANISM: Artificial Sequence	
218	<220> FEATURE:	
219	<223> OTHER INFORMATION: Antisense Oligonucleotide	
220	<400> SEQUENCE: 14	
221	ggagagctca tggcaggccc	20
223	<210> SEQ ID NO: 15	
224	<211> LENGTH: 20	
225	<212> TYPE: DNA	
226	<213> ORGANISM: Artificial Sequence	
227	<220> FEATURE:	
228	<223> OTHER INFORMATION: Antisense Oligonucleotide	
229	<400> SEQUENCE: 15	
230	gtggcgcatg tgcttgagca	20
232	<210> SEQ ID NO: 16	
233	<211> LENGTH: 20	
234	<212> TYPE: DNA	
235	<213> ORGANISM: Artificial Sequence	
236	<220> FEATURE:	
237	<223> OTHER INFORMATION: Antisense Oligonucleotide	
238	<400> SEQUENCE: 16	
239	cccttcacatca tctggtacac	20
241	<210> SEQ ID NO: 17	
242	<211> LENGTH: 20	
243	<212> TYPE: DNA	
244	<213> ORGANISM: Artificial Sequence	
245	<220> FEATURE:	
246	<223> OTHER INFORMATION: Antisense Oligonucleotide	
247	<400> SEQUENCE: 17	
248	atccagggtc tcatcaggag	20
250	<210> SEQ ID NO: 18	
251	<211> LENGTH: 20	
252	<212> TYPE: DNA	
253	<213> ORGANISM: Artificial Sequence	
254	<220> FEATURE:	
255	<223> OTHER INFORMATION: Antisense Oligonucleotide	
256	<400> SEQUENCE: 18	
257	cccggagccc agagatcttc	20

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/516,505

DATE: 12/14/2004
TIME: 18:17:41

Input Set : N:\Crf4\12102004\J516505.raw
Output Set: N:\CRF4\12142004\J516505.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:71; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20

Seq#:75; N Pos. 727

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 5

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/516,505

DATE: 12/14/2004

TIME: 18:17:41

Input Set : N:\CrF4\12102004\J516505.raw

Output Set: N:\CRF4\12142004\J516505.raw

L:715 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:0
L:918 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:75,Line#:0
L:931 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:720